WHAT IS CLAIMED IS:

1. A display apparatus for projection of an image-carrying beam from digital data onto a display surface, the apparatus comprising:

(a) a light source for providing a beam of multicolor light;

(b) a variable filter disposed to provide a periodic attenuation of a range of component wavelengths of said beam of multicolor light in order to provide a variably tinted beam;

(c) a spatial light modulator for modulating said variably tinted beam according to the digital data to provide said image-carrying beam; and

(d) a control logic processor for modulating a bias voltage to said spatial light modulator, said bias voltage modulation synchronous with said periodic attenuation of said variable filter.

2. The display apparatus of claim 1 wherein said spatial light modulator is a reflective liquid crystal device.

3. The display apparatus of claim 2 wherein said liquid crystal device is a transmissive liquid crystal device.

4. The display apparatus of claim 1 wherein said spatial light modulator is a digital micromirror device.

5. The display apparatus of claim 1 wherein said variable filter modulates birefringence.

6. The display apparatus of claim 1 wherein said display surface is a direct-view display surface.

7. The display apparatus of claim 1 wherein said display surface is a projection screen.

8. The display apparatus of claim 1 wherein said display surface is image-retentive.

9. The display apparatus of claim 7 further comprising projection optics for projection of said image-carrying beam onto said projection screen.

10. The display apparatus of claim 6 further comprising projection optics for projection of said image-carrying beam onto said direct-view display surface.

11. The display apparatus of claim 1 further comprising:

(a) direct-view projection lens for projection of said image-carrying beam onto a direct-view display surface;

(b) a screen projection lens for projection of said image-carrying beam onto a projection screen;

(c) a projection optics mounting for interchangeably mounting either said direct-view projection lens or said screen projection lens for projection of said image-carrying beam;

(d) an intensity control for adjusting the intensity of said light source according to the use of either said direct-view projection lens or said screen projection lens; and

whereby said display apparatus can be adapted for direct-view or for projection use.

12. The display apparatus of claim 1 further comprising an operator control for hue adjustment.

13. The display apparatus of claim 12 wherein said operator control conditions said bias voltage to said spatial light modulator.

14. The display apparatus of claim 12 wherein said operator control conditions the intensity of said light source.

15. The display apparatus of claim 12 wherein said operator control comprises a touchpad.

16. The display apparatus of claim 12 wherein said operator control comprises a touchscreen.

17. The display apparatus of claim 1 wherein said variable filter is interchangeable.

18. The display apparatus of claim 1 wherein said variable filter is stationary.

19. The display apparatus of claim 1 wherein said variable filter rotates in the path of said light source.

20. The display apparatus of claim 1 wherein said variable filter is birefringent.

21. The display apparatus of claim 1 wherein said light source comprises an LED.

22. A display apparatus for projection of an image-carrying beam from digital data onto a display surface, the apparatus comprising:

(a) a light source for providing a beam of multicolor light;

(b) a variable filter disposed to provide a periodic attenuation of a range of component wavelengths of said beam of multicolor light in order to provide a variably tinted beam;

(c) a polarizing beamsplitter for splitting said variably tinted beam to form an s-polarized variably tinted beam and a p-polarized variably tinted beam;

(d) a first spatial light modulator for modulating said s-polarized variably tinted beam according to the digital data to provide a first intermediate image-carrying beam;

(e) a second spatial light modulator for modulating said p-polarized variably tinted beam according to the digital data to provide a second intermediate image-carrying beam, whereby pixel positions within said second image-carrying beam are uniformly spatially offset with respect to pixel positions within said first image-carrying beam;

(f) a control logic processor for modulating a bias voltage to said first spatial light modulator, said bias voltage modulation synchronous with said periodic attenuation of said variable filter; and

wherein said polarizing beamsplitter combines said first and second intermediate image-carrying beams to form said image-carrying beam.

23. The display apparatus of claim 22 wherein said first spatial light modulator is a reflective liquid crystal device.

24. The display apparatus of claim 22 wherein said first spatial light modulator is a transmissive liquid crystal device.

25. The display apparatus of claim 22 wherein said second spatial light modulator is a reflective liquid crystal device.

26. The display apparatus of claim 22 wherein said second spatial light modulator is a transmissive liquid crystal device.

27. The display apparatus of claim 22 wherein said first spatial light modulator is a digital micromirror device.

28. The display apparatus of claim 22 wherein said second spatial light modulator is a digital micromirror device.

29. The display apparatus of claim 22 wherein said variable filter operates by controlling birefringence.

30. The display apparatus of claim 22 wherein said display surface is a direct-view display surface.

31. The display apparatus of claim 22 wherein said display surface is a projection screen.

32. The display apparatus of claim 22 wherein said display surface is image-retentive.

33. The display apparatus of claim 31 further comprising projection optics for projection of said image-carrying beam onto said projection screen.

34. The display apparatus of claim 22 further comprising:

(a) direct-view projection lens for projection of said image-carrying beam onto a direct-view display surface;

(b) a screen projection lens for projection of said image-carrying beam onto a projection screen;

(c) a projection optics mounting for interchangeably mounting either said direct-view projection lens or said screen projection lens for projection of said image-carrying beam;

(d) an intensity control for adjusting the intensity of said light source according to the use of either said direct-view projection lens or said screen projection lens; and

whereby said display apparatus can be adapted for direct-view or for projection use.

35. The display apparatus of claim 22 further comprising an operator control for hue adjustment.

36. The display apparatus of claim 35 wherein said operator control conditions said bias voltage to said first spatial light modulator.

37. The display apparatus of claim 35 wherein said operator control conditions the intensity of said light source.

38. The display apparatus of claim 35 wherein said operator control comprises a touchpad.

39. The display apparatus of claim 35 wherein said operator control comprises a touchscreen.

40. The display apparatus of claim 22 wherein said variable filter is interchangeable.

41. The display apparatus of claim 22 wherein said variable filter is stationary.

42. The display apparatus of claim 22 wherein said variable filter rotates in the path of said light source.

43. The display apparatus of claim 22 wherein said light source comprises an LED.

44. A display apparatus for projection of an image-carrying beam from digital data onto a display surface, the apparatus comprising:

(a) at least one first light source for providing a first beam of light having a first component color;

(b) at least one second light source for providing a second beam of light having a second component color;

(c) a spatial light modulator for modulating said first beam of light according to the digital data and for modulating said second beam of light according to the digital data to provide an image-carrying beam; and

(d) a control logic processor for providing a first voltage bias to said spatial light modulator for modulating said first beam of light and for providing a second voltage bias to said spatial light modulator for modulating said second beam of light.

45. The apparatus of claim 44 wherein said first light source comprises an LED.

46. The apparatus of claim 44 wherein said first light source comprises a laser.

47. The apparatus of claim 44 wherein said spatial light modulator is a reflective liquid crystal device.

48. The apparatus of claim 44 wherein said spatial light modulator is a transmissive liquid crystal device.

49. The display apparatus of claim 44 wherein said spatial light modulator is a digital micromirror device.

50. The display apparatus of claim 44 wherein said display surface is a direct-view display surface.

51. The display apparatus of claim 44 wherein said display surface is a projection screen.

52. The display apparatus of claim 44 wherein said display surface is image-retentive.

53. The display apparatus of claim 51 further comprising projection optics for projection of said image-carrying beam onto said projection screen.

54. The display apparatus of claim 44 further comprising:

(a) direct-view projection lens for projection of said image-carrying beam onto a direct-view display surface;

(b) a screen projection lens for projection of said image-carrying beam onto a projection screen;

(c) a projection optics mounting for interchangeably mounting either said direct-view projection lens or said screen projection lens for projection of said image-carrying beam;

(d) an intensity control for adjusting the intensity of said light source according to the use of either said direct-view projection lens or said screen projection lens; and

whereby said display apparatus can be adapted for direct-view or for projection use.

55. The display apparatus of claim 44 further comprising an operator control for hue adjustment.

56. The display apparatus of claim 55 wherein said operator control conditions said bias voltage to said spatial light modulator.

57. The display apparatus of claim 55 wherein said operator control conditions the intensity of said light source.

58. The display apparatus of claim 55 wherein said operator control comprises a touchpad.

59. The display apparatus of claim 55 wherein said operator control comprises a touchscreen.

60. The display apparatus of claim 44 further comprising:

(a) a variable filter disposed to attenuate a range of component wavelengths from said first light source.

61. The display apparatus of claim 60 wherein said variable filter is stationary.

62. The display apparatus of claim 61 wherein said variable filter rotates in the path of said light source.

63. A display apparatus for direct-view display of an image from digital data comprising:

(a) a light source for providing a beam of multicolor light;

(b) a spatial light modulator for modulating said beam of multicolor light according to the digital data to provide an image-carrying beam; and

(c) a diffusive display surface for display of said image-carrying beam.

64. The apparatus of claim 63 wherein said spatial light modulator is a reflective liquid crystal device.

65. The apparatus of claim 63 wherein said spatial light modulator is a transmissive liquid crystal device.

66. The display apparatus of claim 63 wherein said spatial light modulator is a digital micromirror device.

67. The display apparatus of claim 63 further comprising:

(a) a filter disposed to provide a color tint to said beam of multicolor light.

68. The display apparatus of claim 67 wherein said filter is birefringent.

69. The display apparatus of claim 67 wherein said filter provides variable attenuation of color.

70. The display apparatus of claim 67 wherein said filter rotates.

71. The display apparatus of claim 63 further comprising an operator control for hue adjustment.

72. The display apparatus of claim 71 wherein said operator control conditions a bias voltage to said spatial light modulator.

73. The display apparatus of claim 71 wherein said operator control conditions the intensity of said light source.

74. The display apparatus of claim 71 wherein said operator control comprises a touchpad.

75. The display apparatus of claim 71 wherein said operator control comprises a touchscreen.

76. A method for forming an image-carrying beam for display, according to digital data, using a spatial light modulator, the method comprising:

(a) providing a multicolor light source beam;

(b) providing a sequential attenuation to a range of component wavelengths of said multicolor light source beam in order to produce a variably tinted beam;

(c) modulating a bias voltage to the spatial light modulator, said bias voltage modulation synchronous with said sequential attenuation provided to produce said variably tinted beam; and

(d) modulating said variably tinted beam at the spatial light modulator according to said digital data to form the image-carrying beam.

77. The method of claim 76 wherein the step of sequentially attenuating a range of component wavelengths of said multicolor light source beam comprises the step of rotating a variable filter in the path of said multicolor light source beam.

78. The method of claim 76 wherein the step of modulating said variably tinted beam further comprises the step of modulating said digital data using a look-up table.

79. The method of claim 76 wherein the step of modulating a bias voltage is conditioned by data about human observer preferences.

80. The method of claim 76 wherein said digital data comprises data about the image.

81. The method of claim 76 further comprising the step of storing data concerning said bias voltage.

82. The method of claim 76 further comprising the step of storing data concerning said sequential attenuation of said variably tinted beam.

83. The method of claim 76 wherein the step of modulating a bias voltage further comprises the step of sensing an operator control setting.

84. In a digital display apparatus using a spatial light modulator to modulate a monochromatic image for projection onto a display surface, a method for adjusting the hue of said monochromatic image comprising

(a) providing a light source in a repeated sequence wherein component colors are attenuated; and

(b) providing, to said spatial light modulator, a repeated sequence of variable bias voltages in synchronization with said repeated sequence of component color attenuation, the level of each said variable bias voltage being adjustable in order to effect adjustment of the hue of said monochromatic image.

85. The method of claim 84 wherein the step of providing a light source in a repeated sequence comprises the step of rotating a filter having varying color transmission characteristics in the path of a beam of light.

86. The method of claim 84 wherein the step of providing a light source in a repeated sequence comprises the step of modulating a filter having varying color transmission characteristics in the path of a beam of light.

87. A method for display of an image on a display surface according to digital data using a spatial light modulator, the method comprising:

(a) providing a multicolor light source beam;

(b) variably attenuating a range of component wavelengths of said multicolor light source beam in order to provide a variably tinted beam;

(c) modulating a bias voltage to a first spatial light modulator, said bias voltage having a first variable voltage level synchronous with the variable attenuation provided to said variably tinted beam;

(d) modulating a bias voltage to a second spatial light modulator, said bias voltage having a second variable voltage level synchronous with the variable attenuation provided to said variably tinted beam;

(e) modulating said variably tinted beam at said first spatial light modulator according to said digital data to provide a first image-carrying beam;

(f) modulating said variably tinted beam at said second spatial light modulator according to said digital data to provide a second image-carrying beam,

(g) wherein said first and said second image-carrying beams are spatially offset so that pixels of said first image-carrying beam are not coincident with pixels of said second image-carrying beam; and

(h) projecting said first and said second image-carrying beams to the display surface.